

A NEW FISH OF THE GENUS *PARALEPIS* FROM NEW JERSEY.

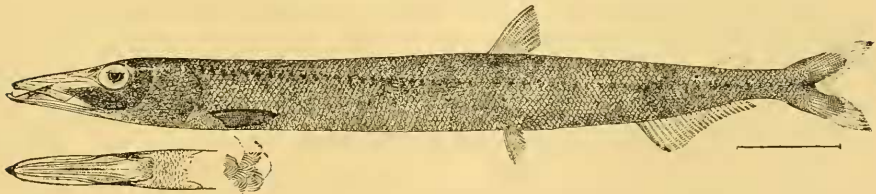
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Paralepis barracudina sp. nov.

Head $4\frac{1}{10}$; depth 10; D. ii, 8, 1; A. iii, 21, 1; P. i, 13; V, i, 8; scales in lateral count along lateral line to caudal base (squamation damaged) estimated about 120?; 18 scales (several lost) in slight oblique series down from dorsal origin to that of ventral; about 70? predorsal scales; head width $5\frac{1}{4}$ its length; greatest head depth 3; depressed dorsal length 3; pectoral $2\frac{2}{3}$; ventral 5; least depth caudal peduncle $6\frac{2}{3}$; anal base about $1\frac{3}{4}$; mandible 2; snout $2\frac{1}{2}$ in head, measured from upper jaw tip; eye $6\frac{1}{6}$; maxillary 3; interorbital $8\frac{1}{4}$.

Body elongate, slender, well compressed, edges convex, though lower more constricted than upper. Greatest depth about dorsal origin, body slightly tapering forward from this point, and more suddenly behind. Sides of body flattened. Caudal peduncle small, well compressed, and least depth nearly half its length.

Head attenuated, well compressed, lower profile nearly straight, and upper slightly concave anteriorly. Snout long, depressed or



flattened above, and sides slightly convex. Eye rounded, little longer than deep, high or close to upper profile, and placed slightly behind middle in head length. Mouth terminal superiorly, moderately long, and gape not extending back more than half length of maxillary. Jaws thin, mandible large, well projecting beyond tip of upper jaw and with slight symphyseal knob fitting in a corresponding shallow emargination above, though latter quite broad so that front edge of upper jaw laterally appears to ensheath it. Mandibular rami with entire low prominent longitudinal external ridges. Maxillary thin, moderately broad, slipping under thin preorbital edge above, and end slightly more than $\frac{2}{3}$ to eye. Uniserial minute, short, close-set, rather robust, compressed and backwardly-curved teeth along upper jaw edge,

which begin anteriorly at each side of anterior emargination and extend back short space from distal maxillary end. Anterior end of upper jaw thin and entirely edentulous. Uniserial teeth on each palatine, anteriorly nearly large as symphyseal canines, and gradually decreasing in size posteriorly. No other teeth on roof of mouth. On each side of mandibular symphysis a small and nearly erect canine. Just behind these and well inside 1 or 2 smaller canines. A short space still posterior uniserial small mandibular teeth begin on each ramus along edges, nearly uniform, small, and similar to those above except more erect, or even slightly leaning forward at anterior region. Mandibular teeth continue well back inside mouth. Rami of mandible well elevated inside mouth posteriorly. Tongue elongately spatulate, well free in front, extending forward nearly opposite tip of upper jaw, and with one series of recurved teeth, similar to those on front of palatines, along each upper edge, and posteriorly these series become slightly approximated. At tongue base each side a knob, opposite and posterior to which surface smooth and edentulous. Lips extremely thin, membranous, but little developed along jaw edges. Nostrils inconspicuous, 2 small pores near last third in snout length or nearly opposite distal maxillary end, and close to upper profile. Interorbital region depressed, concave medianly. Occipital region with even convex surface. Frontal, prefrontal, supraorbital and preorbital ridges prominent. Upper postorbital ridge prominent to each opercle, and preopercular ridge sloping down in wide curve to mandible. Lower surface of head convexly constricted.

Gill-opening large, extending well forward or about last $\frac{2}{3}$ in snout length, and behind well above eye. Epibranchial region $\frac{1}{3}$ combined cerato-hypobranchial. Rakers slender, conic, single, bifid and often trifid, on epibranchials about 8, or 1 or 2 more + 25 cerato-hypobranchials, also several more sometimes. Longest rakers about $\frac{2}{3}$ longest filaments, and latter about $\frac{2}{3}$ horizontal eye. Pseudobranchiæ large, nearly equal largest filaments. Isthmus anteriorly long thin frenum, and posteriorly still narrow with convex surface. Peritoneum with outer membranes bronzed, and inner lining blackish.

Scales small, cycloid, caducous, and with conspicuous striæ on exposed surfaces enlarged, very distinct, extending to edges, and more or less curved in approximation toward median axis. Body scaly, except upper front portion of head before eyes, mandible, all fins except caudal base, and narrow area below shoulder-girdle nearly to ventrals. This latter as a very narrow naked strip over which the scales do not seem to pass. Scales on trunk arranged in longitudinal series, those above lateral line slope down obliquely parallel with its

course, and those below in nearly even horizontal series. About 4 rows of scales on cheek extending well forward on preorbital region nearly opposite gape of mouth. Top of head scaly nearly to interorbital. Opercles entirely scaly, scales extending down over branchiostegals, at least above. Breast sides covered with small scales, at least a little smaller than others. No scaly axillary flaps. Small scaly flap between bases of ventrals. Small scales on caudal base. Lateral line inconspicuous, continuous, sloping gradually down from shoulder to caudal base, and scales in its course not enlarged. Where scales have fallen its course is very evident by enlarged pigmented pockets, but showing indistinctly through perfect squamation. Tubes very inconspicuous, simple, short, little exposed, and rather sparse, or alternately skipping 1 or more scales.

Dorsal origin inserted little nearer caudal base than hind preopercle edge, small, graduated down from second simple ray, and base about $\frac{2}{3}$ its depressed length. Anal inserted little nearer dorsal origin than caudal base, first branched rays longest (edges damaged) and posterior half of fin much lower. Adipose dorsal not determined (damaged). Caudal (damaged) small, and 7 rudimentary rays both above and below well developed. Pectoral small, low, inserted close after end of opercle, and uppermost rays longest. Ventral inserted about opposite base of fourth branched dorsal ray, small, rounded, and depressed fin about $3\frac{1}{2}$ to anal. Vent just after tips of depressed ventrals.

Color when fresh in alcohol deep lilac or leaden-grayish generally, with more or less dull neutral shades and silvered reflections. Coloration largely uniform, scarcely paler below. Edges of bones of head above with more or less blackish pigment. Inside mouth, tongue, and within gill-opening blackish. Fins all dull pale grayish, dorsal and caudal slightly dusky. Iris shining leaden-dusky.

Length $8\frac{1}{4}$ inches (caudal damaged).

Type, No. 37,627, A. N. S. P. Corson's Inlet, Cape May County, N. J. March 27th 1910. Dr. R. J. Phillips.

This is the only example obtained, and was found on the beach. Though in fair preservation, it had been disturbed a little by some crabs, which damaged part of the back in the region of the adipose dorsal. Our species appears related to the European *P. coregonoides*, differing chiefly in the smaller scales and having the teeth in the jaws all minute except the anterior palatines and mandibular canines. According to Moreau¹ the scales of *P. coregonoides* are about 64 in the

¹ Poiss. France, III, 1881, p. 519, fig. 205.

lateral line, and his rough figure shows nearly as many intended to represent a lateral count. We have examined a single poorly preserved Mediterranean example from the Bonaparte collection, evidently the basis of the latter's figure and description of his *P. coregonoides*.² It shows about 60 scale pockets, in the course of the lateral line, which do not extend very much posterior to the anal base. Though the snout and mandible are considerably damaged they show much larger teeth along edges of the latter, than on edges of the upper jaw. The ventrals are inserted behind dorsal origin and the A. iii, 24? A specimen from Lat. 28° 43' N., Long. 87° 14' 30" W., figured by Goode and Bean as *P. coregonoides*,³ differs considerably from our example in the nearly even jaws with canines in the front of both, maxillary extending quite close toward the eye, deeper body and but slightly emarginated caudal. *P. speciosus* Belloti differs according to the original account and figure⁴ in having the ventrals inserted slightly before the dorsal. *P. borealis* Reinhardt, said to range south in the Atlantic to Cape Ann, has been referred to a different genus, chiefly as the ventrals are inserted entirely behind the dorsal. Goode and Bean figure an example they refer to *P. borealis*⁵ which shows the head $4\frac{2}{3}$, depth nearly $13\frac{1}{2}$, dorsal origin nearly last third in total length, A. iii, 26 and nearly 200 scales in a lateral count from shoulder to caudal base. It may be here noted in this connection that *Paralepis*, usually credited to Risso in 1826, cannot date from then, as it first occurs in Bosc, this author virtually naming Cuvier's account, which is not tenable as proposed in the French vernacular.⁶ In Bosc's first account, under *Coregonus*, he says "le genre *Paralepis* de Cuvier enlève l'espèce de ce nom à celui-ci,"⁷ and if this be considered inadmissible his next account⁸ must be taken. As the first species, *P. coregonoides* Risso,⁹ has been virtually allowed the type, it may be so considered still. The occurrence of *Paralepis barracudina* on our Atlantic shores is of interest not only as a new form and addition to our fauna, but also in further mapping out the distribution of the genus.

(*Barracudina*, diminutive of *Barracuda* or *Sphyræna*, to which the species of *Paralepis* bear a close superficial resemblance.)

² *Faun. Italica*, III, pt. I, xxix, 1840, descr., Pl. fig. 2.

³ *Ocean Ich.*, 1895, p. 119, Pl. 39, fig. 149.

⁴ *Atti Soc. Ital. S. N.*, XX, 1877, pp. 54, 57, fig. Nice.

⁵ *Ocean. Ich.*, 1895, p. 119, Pl. 38, fig. 143.

⁶ *Régne Animal*, II, 1817, p. 290.

⁷ *Nouv. Dict. S. N.*, VIII, 1817, p. 59.

⁸ *L. c.*, XXIV, 1818, p. 520.

⁹ *Journ. Phys. Chim. H. N.*, XCI, 1820 (Oct.), p. 253. Nice. (This is the earliest available reference to this species.)